

ADAM-4562

**1 port Isolated USB to RS-232 Converter
User's Manual**

1.1 Introduction

Advantech's ADAM-4562 allows PC users to connect their serial devices to systems that use USB interface. By attaching the ADAM-4562 to a PC, it will no longer be necessary to open the chassis or turn off the PC to install the hub. With the ADAM-4562, the user instantly gets one extra high-speed RS-232 ports which is the **Full Modem control signals**. In addition, since the power is derived from the USB port, there are not any cumbersome power adapters. This makes the ADAM-4562 especially suitable for printers, POS system and industrial control devices.

Compliant with USB v1.1, the ADAM-4562 features a lot of powerful functions such as high-speed 115.2 Kbps, support for various operating systems and Full Modem control signal. By simply plugging in a USB hub, the ADAM-4562 eliminates configuration issues associated with expensive, antiquated card solutions. This eliminates the need to remove the PC cover and or to reboot the operating system during installation. The user only installs the driver, and follows the on-screen instructions. This reduces a lot of programming time.

The USB interface, now standard on virtually all new PCs, offers significant advantages over earlier bus types. A signal USB interface can connect up to 127 devices at data rates up to 12 Mbps. This kind of easy and convenient connectivity means that your network can grow with your needs.

1.2 Features

- Output type: Full compliance with USB v1.1 specifications
- Transmission speed up to 115.2Kbps
- Full-duplex transmitter (TX) and receiver (RX);
Six Modem control pins RTS, CTS, DTR, DSR, DCD, and RI)
- Isolation protection 2,500 Vdc provided
- No external power supply necessary; the ADAM-4562 derives its power from the USB port
- Plug-and play installation
- Hot swap function supported
- Drivers for Windows 98/2000/XP

1.3 Specification

- **Compatibility:** USB v1.1 standard
 - **Interface:** Network: USB
Serial: RS232
 - **Connector:** Network: USB-type A connector (type A to type B cable provided)
Serial: DB-9 serial connectors
 - **Transmission speed:** 75bps to 115.2Kbps
 - **Power Consumption :** 155mA@5V(typical)
220mA@5V(Max.)
 - **Parity bit:** Odd, Even, Mark, Space, None
 - **Data bit:** 5, 6, 7, 8
 - **Stop bit :** 1, 1.5 , 2
 - **Error detection:** Parity error, frame error, serial break
 - **Isolation protection:** 2,500 Vdc
 - **Case:** ABS with captive mounting hardware
 - **Operating temperature:** 0° to 70° C
 - **Storage Temperature:** -25° to 80° C
 - **Operating Humidity:** 20% to 95% (non-condensing)
 - **Storage Humidity:** 0% to 95% (non-condensing)
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1.4 Package Checklist

- ADAM-4562
- ADAM series CD
- One Type A to Type B USB cable
- NYLON DIN-rail Mounting Adapter
- SECC Panel Mounting Bracket

If you have any questions about USB standard, please refer to the web
Site: www.usb.org

2 Hardware Installation

2.1 Network Architecture

Traditional serial port communication uses a COM port board that slides into one of the slots at the back of your PC. With the ADAM-4562, you can access the COM port from USB ports. The ADAM-4562 can be integrated into the network architecture of any protocol.

Note: all the operating systems on your host must support USB v1.1 or above standard, such as Windows 98/2000/XP. USB devices are used in “Master-Slave” architecture. Before you use ADAM-4562, you must determine the master PC. The following illustration shows the network architecture:

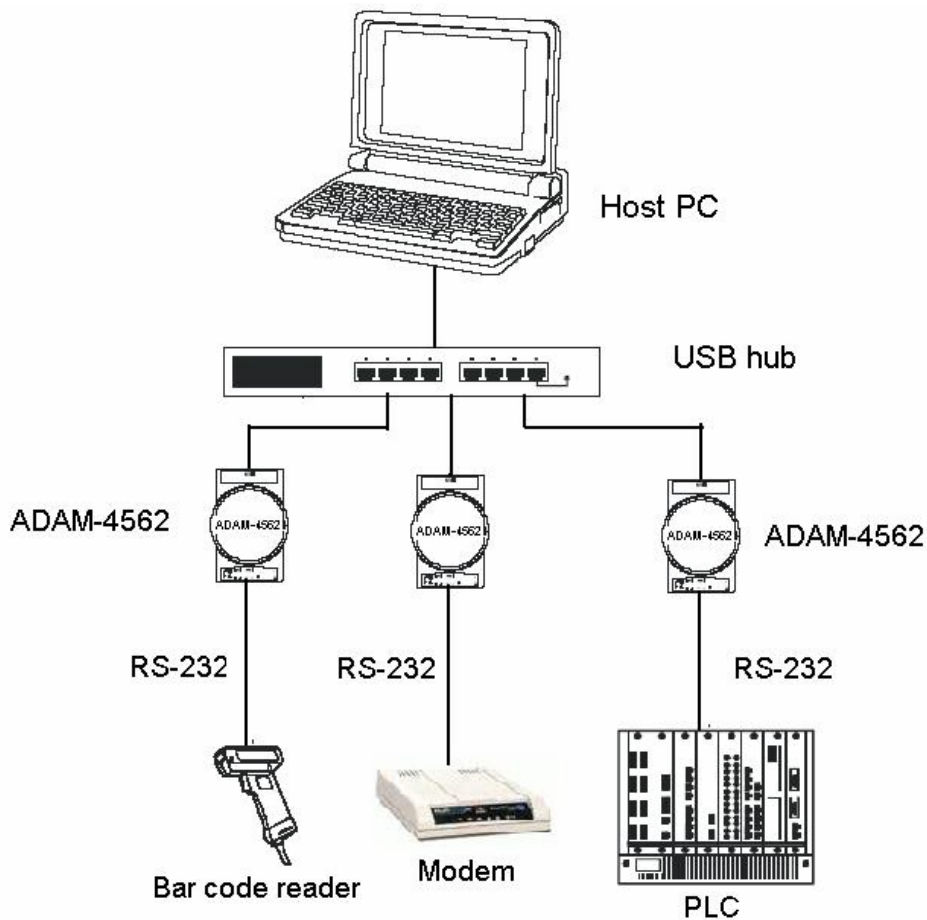


Figure 2-1: Network Architecture

2.2 Network Connection

When using the ADAM-4562, you will simply plug one end of USB cable (included in package) into ADAM-4562, and the other end into the USB hub or your host PC.

2.3 Serial Connection

The model of the ADAM-4562 has one RS-232 DTE connector for connecting serial ports on the bottom of module.

Note: In USB v1.1 standard, if you have used the COM3, COM4.....COMn of host PC. When you plug ADAM-4562 in the host PC, the COM port will be COMn+1.

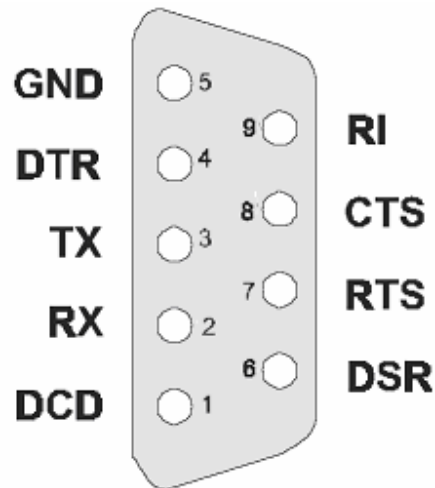
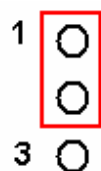


Figure 2-1 RS-232 Terminal (DTE) connections

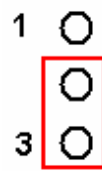
2.4 Jumper Settings

Grounding is one of the most important issues for our system. Just like Frame Ground of the computer, this signal offers a reference point of the electronic circuit inside the computer. If we want to communicate with this computer, both Signal Ground and Frame Ground should be connected to make a reference point of each other's electronic circuit. Generally speaking, it is necessary to install an individual grounding bar for each system, such as computer networks, power systems, telecommunication networks, etc. Those individual grounding bars not only provide the individual reference point, but also make the earth a our ground!

Jumper JP1 allows choosing the ground setting. If jumpers JP1 is set as following, the pins 1 & 2 are closed and it means the ground is connected to the shell of DB9 connector. On the other words, the pins 2 & 3 are closed and it means the ground is floating



ground is connected to
the shell of DB9 connector
(default setting)



ground is floating

3. Driver and Utility Installation

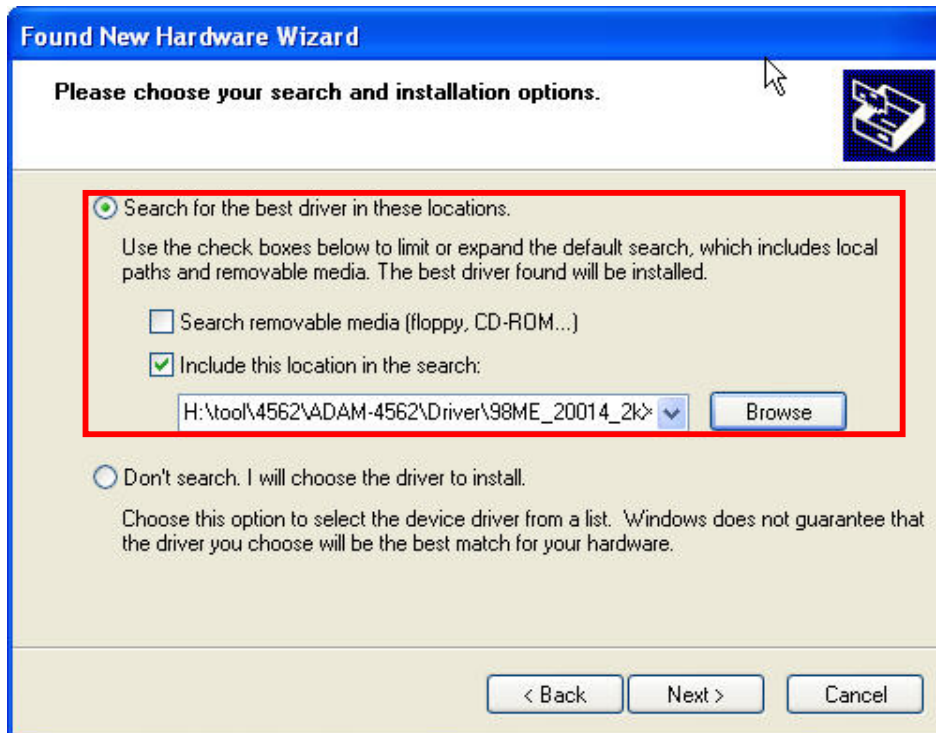
In order to use a PC to control serial devices connected to the ADAM-4562, you must first have a host running Windows 98/2000/XP.

Following are the installation instructions to set up the ADAM-4562.

1. Insert the ADAM-4562 Driver utility diskette into the CD drive (e.g. E:\) on the host PC.
2. Plug in the USB connector of ADAM-4562 then system will detect the new device automatically and show the hardware wizard. Please choose the item **Install from a list or specific location** if it is the first use on this PC.



3. Indicate the location to specify the installation path like as E:\ADAM-4562\driver\98_2k_XP\ then it will auto-select the suitable driver to install for your system. After you have specified the installation path, click the *Next* button.



4. It will has the dialog window for this installation, please click the button of Continue Anyway to start set up



5. It shows the following window when the installation is completed and use also can find the com port of ADAM-4561/4562 on Device manager

